

10 _____ P12-05-05

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Work Order ID 159561

Wednesday, April 12, 2017 4:12:58 PM

159561

Page 3

Item ID: D2891-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Support 2.25
Start Date: 4/18/2017 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 5/2/2017 Req'd Qty: 10.00 ***10*** Customer:
Reference: SCHEDULED/S

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	1.00							
Quality Control									

DAS
21
9-05

MAY 08 2017

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LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Picklist Print

Wednesday, April 12, 2017 4:12:57 PM

Work Order ID: 159561

159561

Parent Item: D2891-1

D2891-1

Parent Item Name: Support 2.25

Start Date: 4/18/2017

Required Date: 5/2/2017

Start Qty: 10.00

Required Qty: 10.00

Comments:

IPP C02.11.26Added P/OKJ

IPP D 08.03.19 Re-format EC verified: DD

IPP Rev:E

11.08.04 as per dwg rev.B DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
DSK076		Manufactured	No			110	Each	10.0000	0.5	5		DAS	
									**	5		20	17-05-02
D2891-1 Turning Detail													
						Location		Loc Qty		Loc Code			
						MAT060		10					
						156451		10		5			

DQA: _____ Date: _____



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Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

DART AEROSPACE LTD		Work Order:	159561
Description: Ø2.250 Support		Part Number:	D2891-1
Inspection Dwg: D2891	Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.188	0.193		.188	.188	.188	.188	.188
AB	0.240	0.260		.250	.250	.250	.250	.247
AC	0.115	0.150		.125	.125	.125	.125	.125
AD	0.040	0.060		.049	.049	.050	.050	.047
AE	0.010	0.020		.015	.015	.015	.015	.015
AF	0.240	0.260		.250	.250	.250	.250	.250
AG	0.290	0.310		.300	.300	.300	.300	.300
AH	0.115	0.150		.139	.139	.138	.138	.138
AI	0.454	0.474		.460	.460	.462	.462	.462
AJ	2.779	2.789		2.784	2.784	2.784	2.784	2.784
AK	0.240	0.260		.250	.250	.250	.250	.250
AL	1.002	1.042		1.042	1.042	1.042	1.042	1.037
AM	0.053	0.073		.063	.063	.063	.063	.063
AN	0.257	0.262		.258	.258	.258	.258	.258
AO	1.663	1.683		1.675	1.677	1.675	1.675	1.676
AP	0.053	0.073		.063	.063	.063	.063	.063
AQ	0.022	0.042		.032	.032	.032	.032	.032
AR								
AS								
AT								
Accept/Reject								

Measured by:	DAS 20 9-89	Date:	17-05-03
Audited by:	17-05-05	Date:	
Preliminary Approval:		Date:	

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.09.26	Dwg Rev updated	KJ	

DART AEROSPACE LTD		Work Order: 159561
Description: Ø2.250 Support		Part Number: D2891-1
Inspection Dwg: D2891	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				6	7	8	9	10
HAAS Section								
AA	0.188	0.193		.188	.188	.188	.188	.188
AB	0.240	0.260		.247	.245	.245	.245	.245
AC	0.115	0.150		.125	.125	.125	.125	.125
AD	0.040	0.060		.047	.047	.047	.051	.051
AE	0.010	0.020		.015	.015	.015	.015	.015
AF	0.240	0.260		.250	.250	.250	.250	.250
AG	0.290	0.310		.300	.300	.300	.300	.300
AH	0.115	0.150		.138	.138	.138	.138	.138
AI	0.454	0.474		.462	.462	.462	.462	.462
AJ	2.779	2.789		2.784	2.784	2.784	2.784	2.784
AK	0.240	0.260		.250	.250	.250	.250	.250
AL	1.002	1.042		1.042	1.042	1.042	1.042	1.042
AM	0.053	0.073		.063	.063	.063	.063	.063
AN	0.257	0.262		.258	.258	.258	.258	.258
AO	1.663	1.683		1.676	1.676	1.676	1.676	1.676
AP	0.053	0.073		.063	.063	.063	.063	.063
AQ	0.022	0.042		.032	.032	.032	.032	.032
AR								
AS								
AT								
Accept/Reject								

Measured by: DAS 20 9-89	Date: 17-05-03
Audited by: P20505	Date:
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.09.26	Dwg Rev updated	KJ	

NOTES:

1) MATERIAL: 17-4 PH STAINLESS STEEL, H900 OR H925 CONDITION
MIN UTS = 170 KSI (38 HRC)
(REF DART SPEC. D6104)

2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 (REF X.XXX = ± 0.010) UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: DART LOGO (PER DART SUPPLIED GRAPHIC) AND PART NUMBER IN THIS AREA WITH 0.125 HIGH LETTERING
0.010-0.020 DEEP, PER DART QSI 044 6.3.

7) WEIGHT: 0.38 lb

8) FOR THE ENTIRE INNER CONCAVE SURFACE:
ABRADE SURFACE WITH 400-GRIT SANDPAPER. REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY 0.03" TO 0.05" THICK LAYER OF 3M SCOTCH-WELD 2216 B/A ADHESIVE TO MATING SURFACE OF SUPPORT. ALLOW TO CURE FOR 24 HOURS.

SHOP COPY

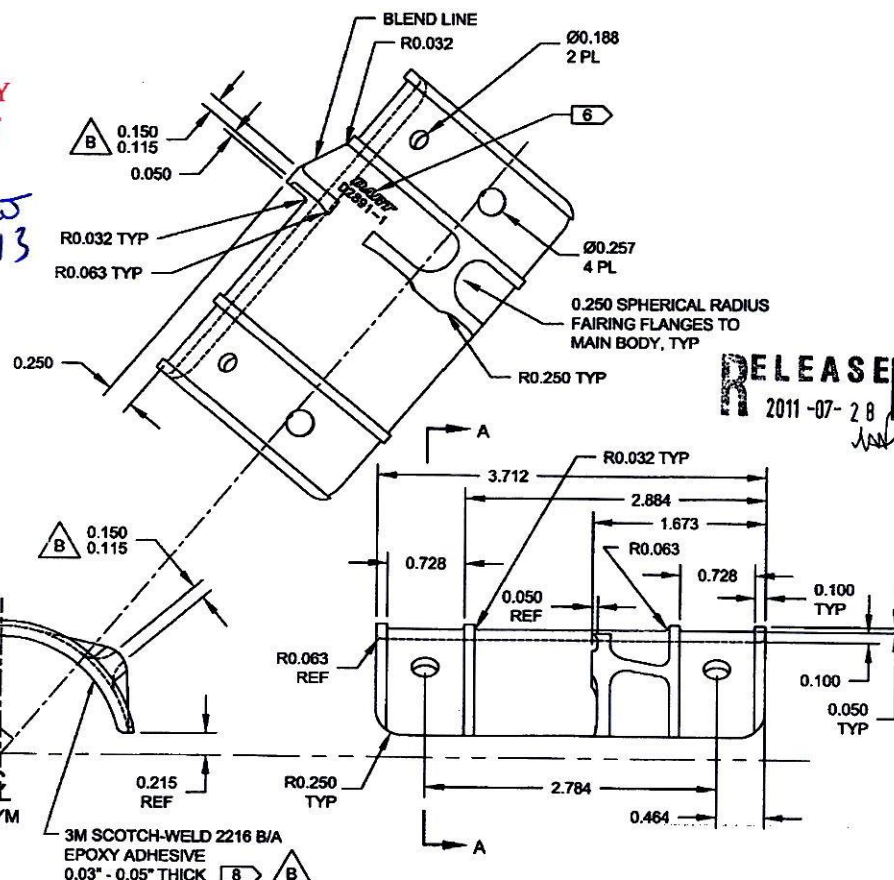
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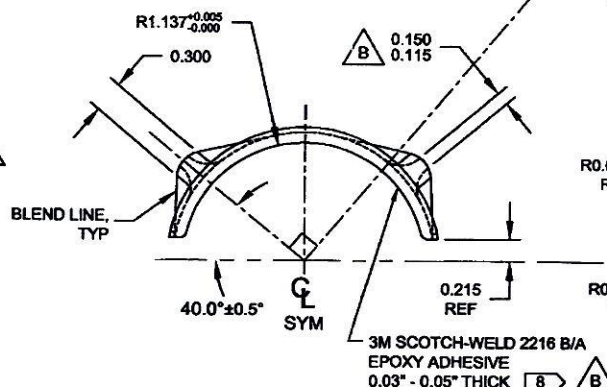
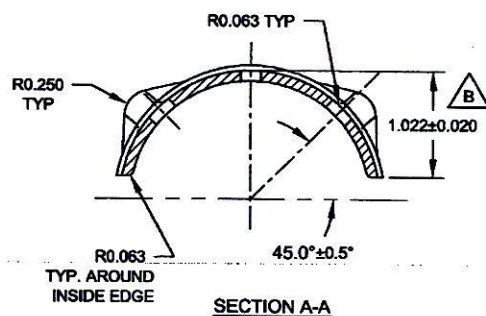
WORK ORDER

NO. 159561 MW

1704-13



RELEASED
2011-07-28



D2891-1 SUPPORT

B	RMV FINISH, ADD 3M 2216, ADD H925 MATL OPTION, UPDATE TOLERANCE (ZN D4-1,B4-1,B6-1)	CP	11.07.15
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	JP		
DRAWN	JP		
CHECKED	ASS		
MFG. APPR.	JP		
APPROVED	JP		
DE APPR.	JP		
DATE	11.07.15		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D2891 TITLE Ø2.250 SUPPORT REV. B SHEET 1 OF 1 SCALE NTS COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			